

## **TRUST MANAGEMENT SYSTEMS AND METHODS**

### **ABSTRACT OF THE DISCLOSURE**

The present invention provides systems and methods for making efficient trust management decisions. A trust management engine is provided that processes requests for system resources, authorizations or certificates, and the identity of one or more root authorities that are ultimately responsible for granting or denying the requests. To determine whether a request should be granted, the trust management engine identifies a set principals from whom authorization may flow, and interprets each of the certificates as a function of the state of one or more of the principals. The processing logic iteratively evaluates the functions represented by the certificates, updates the states of the principals, and repeats this process until a reliable determination can be made as to whether the request should be granted or denied. The certificates may be evaluated until the state of the root authority indicates that the request should be granted, or until further evaluation of the certificates is ineffective in changing the state of the principals.